US Army Corps of Engineers
Portland District

Anadromous Fish Evaluation Program

Summary of 2006 Research

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Portland District Projects

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- John Day Dam
  - Turbine and tailrace survival
  - Plan for 2007
- The Dalles Dam
  - Spillway Studies
  - Plan for 2007
- Bonneville Dam
  - Corner Collector PIT detection
  - Survival (Pool, Project, Spillway)
  - Plan for 2007
- System
  - Turbine Survival Program
  - JSATS Tag Effects
  - Post-FCRPS Survival
  - Future Plans

John Day Dam: *2006*
Operations

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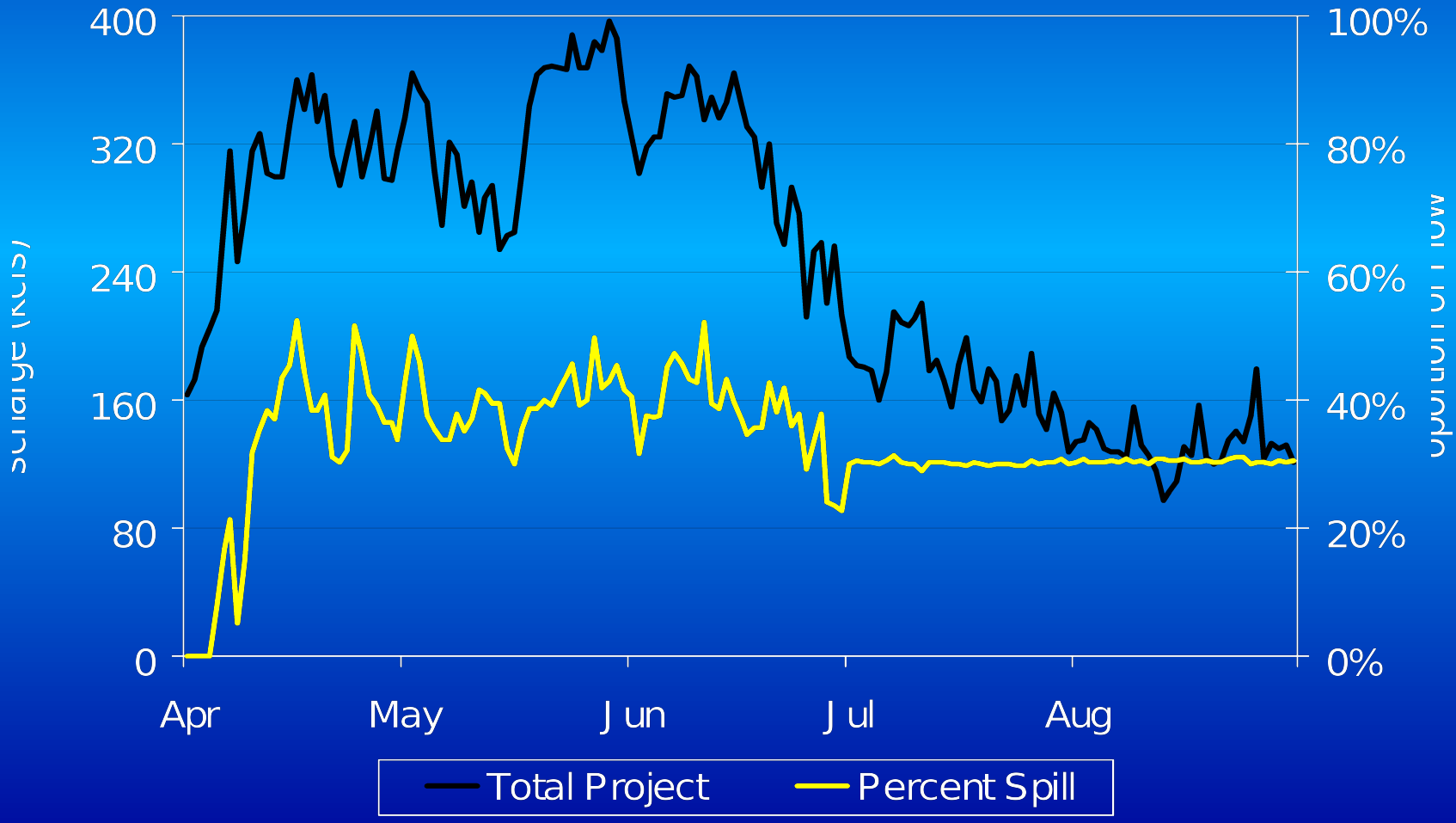

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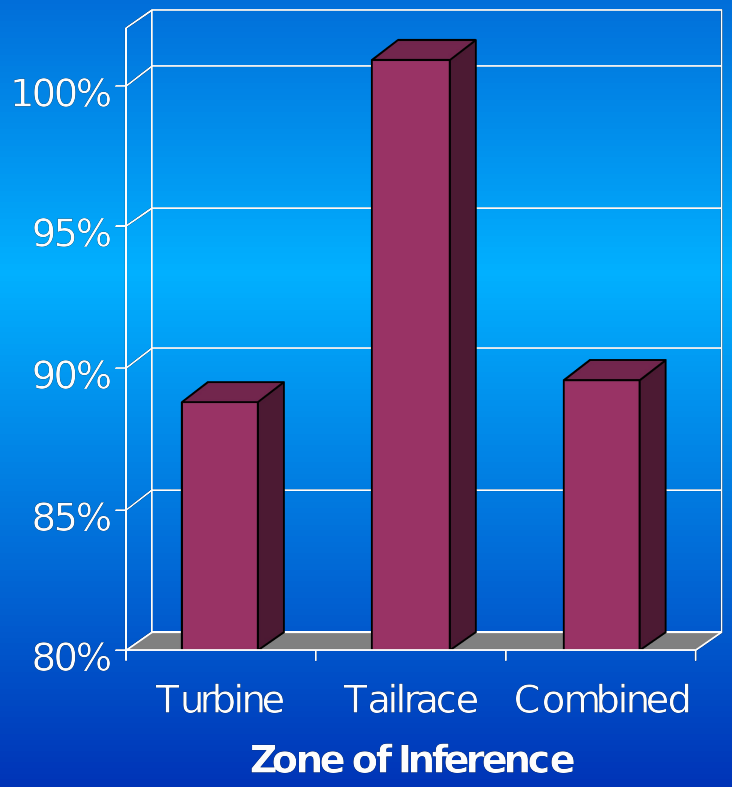
John Day Dam: *Turbine and Tailrace survival*

- **2006 Studies**
  - **Release Locations**
  - **Results**
  - **Conclusions**
- **Plan for 2007**
  - **TSW Development**



The Dalles Dam: *2006*
Operations

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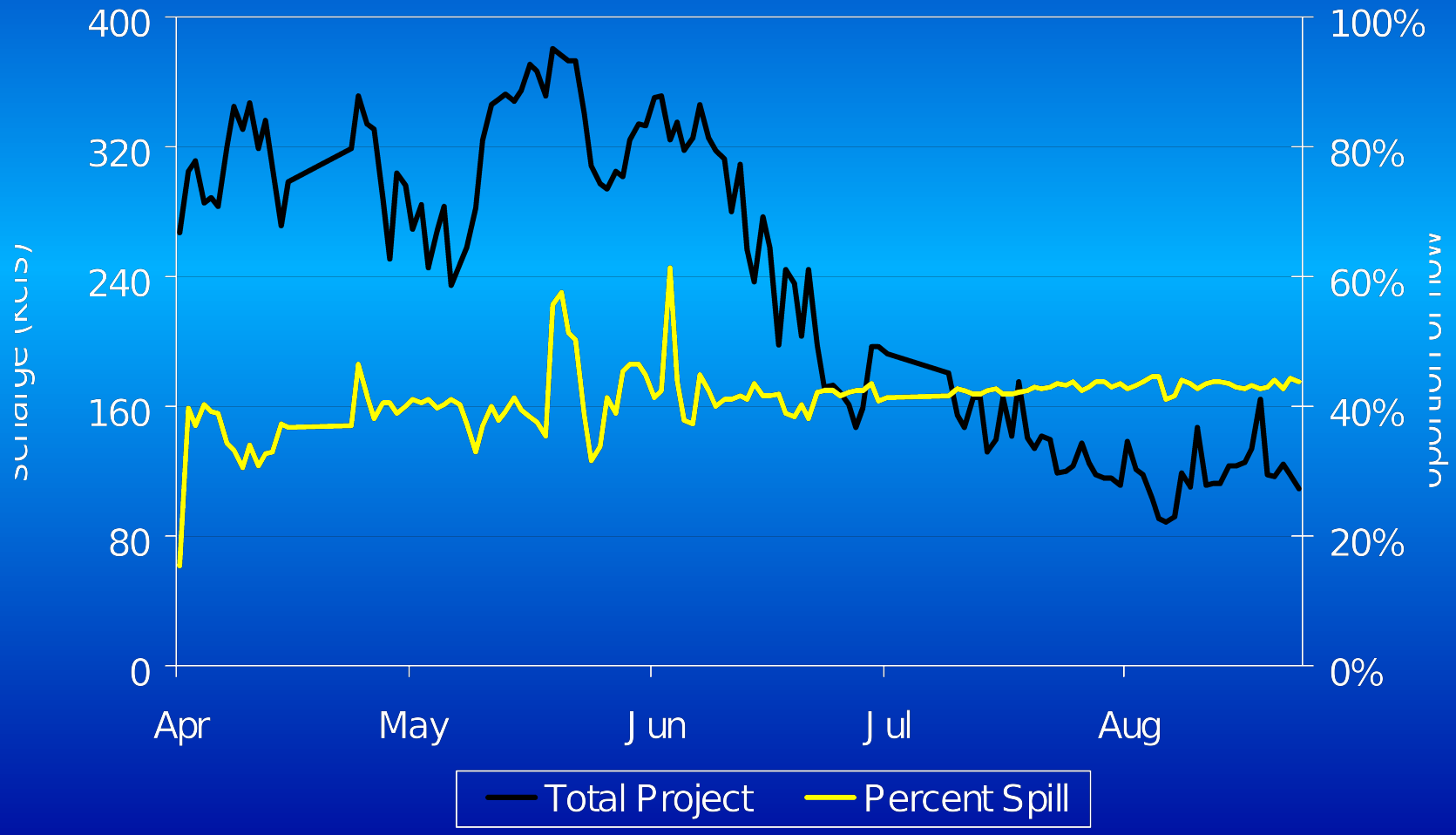

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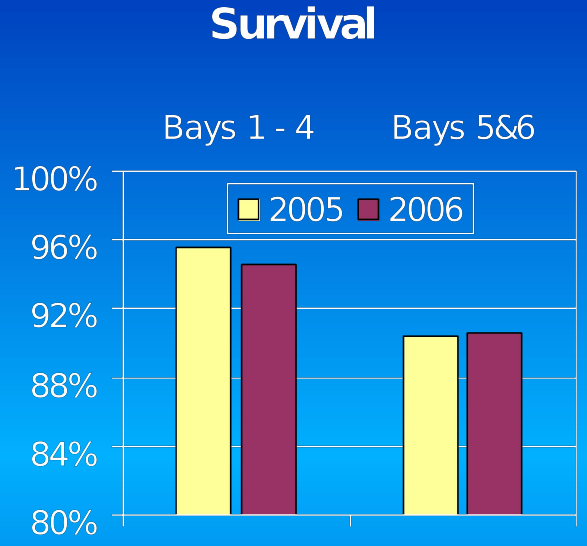
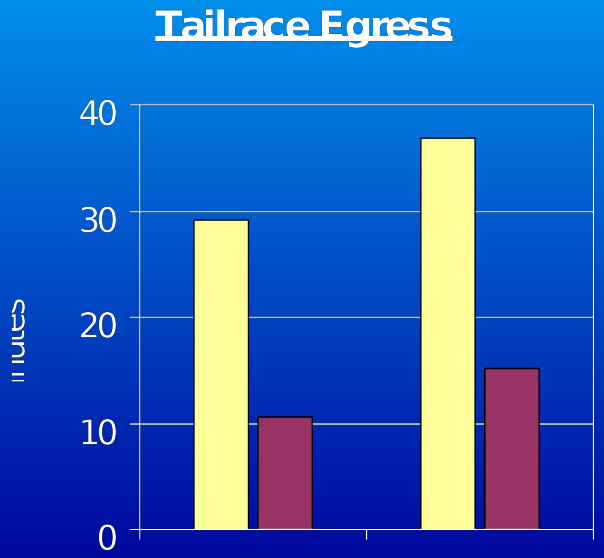
The Dalles Dam: *Spillway Studies*

- **Spillway Vortex**
  - ***Distribution***
  - ***Survival (SR)***
  - ***Tailrace Egress***
- **Project Survival (PR)**
- **Plan for 2007**





Bonneville Dam: *2006 Operations*

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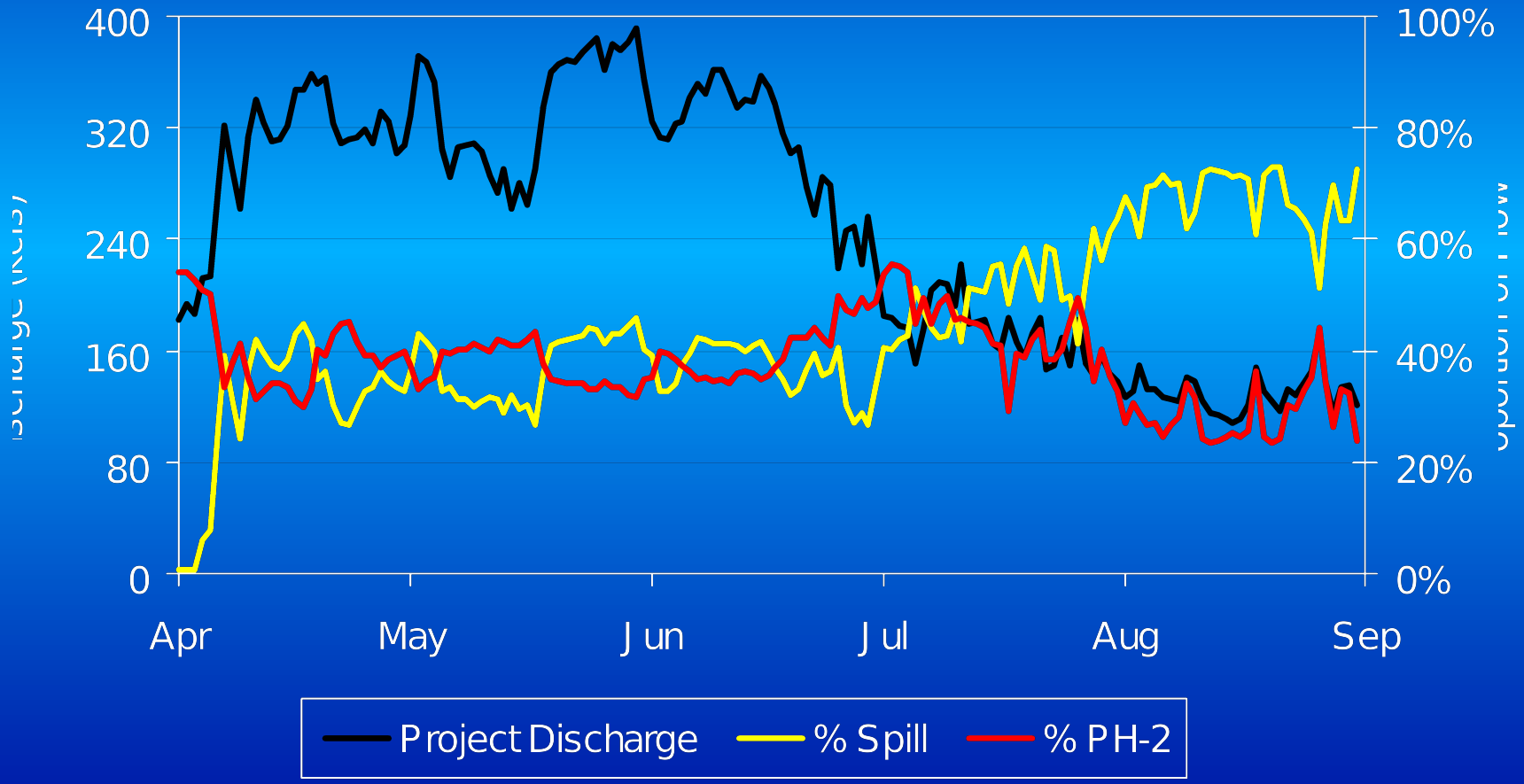

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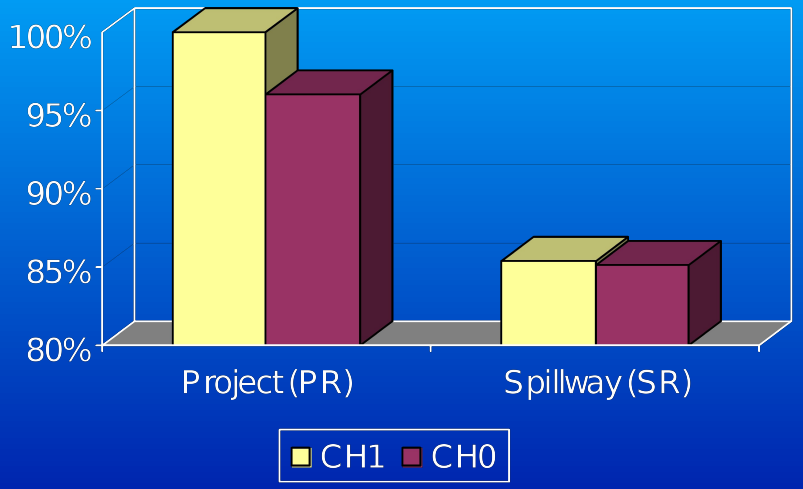
Bonneville Dam: *Detection and Survival*

- **B2CC PIT Detection**
  - ***ROR CH1 w/ST = 52%***
  - ***ROR CH1 w/SST = 69%***
  - ***Direct w/SST = 60%***
- **Survival**
  - ***Yearling Chinook***
    - ***Project (16 May – 05 June)***
    - ***Spillway (01 June – 07 June)***
  - ***Subyearling Chinook***
    - ***Project (12 June – 15 July)***
    - ***Spillway (12 June – 15 July)***
- **Plan for 2007**



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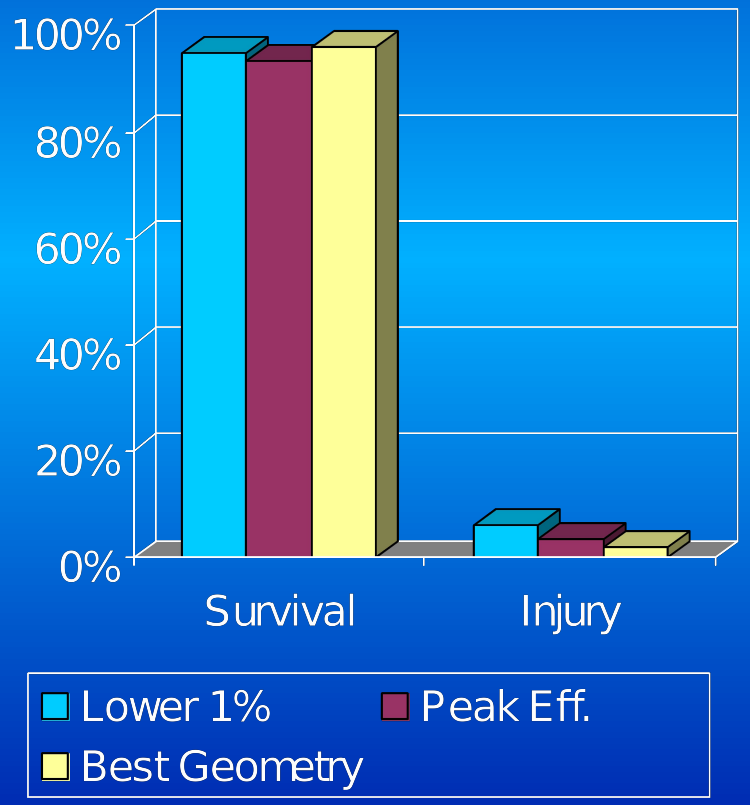
System Wide: *Turbine Survival Program*

- **Biological Index Testing**
- **Results**
- **Conclusions**
  - **Best geometry provided the most benign passage**



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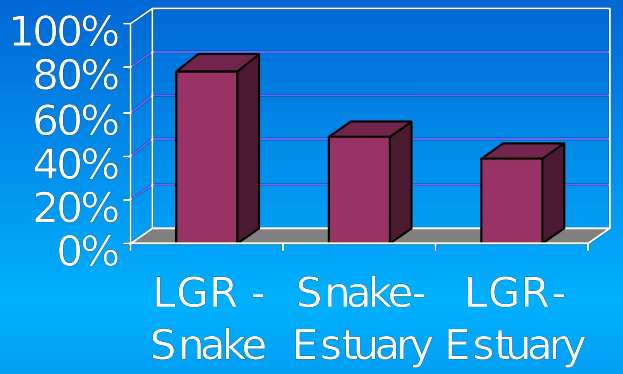
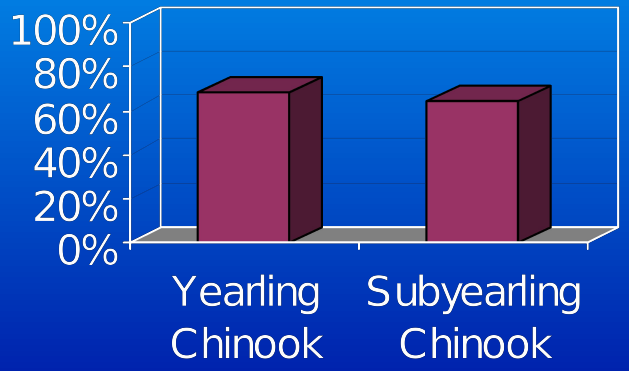
System Wide: *Post-FCRPS Survival*

- **Two release locations**
  - **LGR Tailrace**
  - **Bonneville Tailrace**
- **Results**
  - **LGR to Estuary**
  - **Bonneville to Estuary**
- **Conclusions**





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System Wide: *Tag Effects – Results and Conclusions*

- **Tag Effects Study: JSATS vs. PIT**
  - **Field**
    - ***Survival***
    - ***Timing***
    - ***Detection Probability***
  - **Laboratory**
    - ***Predator avoidance***
    - ***Survival***
    - ***Tag Loss***
    - ***Growth***

- ***Not significantly different, however, sample sizes preclude ability to measure small differences***
- ***No evidence of bias for CH1 or CH0***
- ***No evidence of bias for CH1***
- ***Evidence of bias for CH0 < 95 mm in fork length***

- ***Plan for 2007***

Acknowledgements: *Study PI's*

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